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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, PHUOC H

ART UNIT PAPER NUMBER

2143

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/001,415

Applicant(s)

JOHNSON ET AL.

Examiner

Phuoc H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-20 and 23-31 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date May 12, 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on May 9, 2005. Previous office action contained claims 1-31. Applicant amended claims 1, 5, 9, 19, and 21-24. Amendment filed on May 9, 2005 have been entered and made of record. Therefore, pending claims 1-31 is presented for further consideration and examination.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 21-24, and 31 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 23 objected to because of the following informalities:

Claim 23 recites the first server in line 6 of the claim. There is insufficient antecedent basis for these elements in the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7,9-20,23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schutte et al. (Hereafter, Schutte) U.S. Patent 6, 178,455 as in view of Taniguchi et al. (Hereafter, Taniguchi) ("Subnet Configuration Option Set for DHCP" <draft-ietf-dhcp-dyn-subnet-conf-02.txt, 2 March 1998, pages 1-14).
6. Regarding claims 1, 24-27, and 31, Schutte discloses a method of providing sets of network addresses for dynamically configuring hosts on a network (Figures 1 and 12), the method comprising the computer-implemented steps of assigning one or more subnets of a given size to a pool of available subnets (e.g. the IPA manager has a list of free IP addresses per each Net ID and assigns the set of IP address if the subnet needed it such as an example given in the subnet C 210(j) needed an IP address for the Host 108 (a)) (Figure 12, 1204 and col. 17 lines 1-4), sending a first request (e.g. DHCPDISCOVER message) from a first host for a first count of network addresses for a first set of network addresses (e.g. number of IP addresses requested) for dynamically configuring hosts on the network (col. 16 lines 43-45), receiving a first message indicating the first set of network addresses (e.g. DHCP receive the DHCPDISCOVER message) (col. 16 lines 39-43), receiving a second message from a second host requesting a second count of network addresses for a second set of network addresses for dynamically configuring hosts on the network (e.g. Figure 1 discloses a multiple RF modems (106 a-n) provide IP addresses) to a plurality of PCs (108. a-n), inherently, each of the RF modems such as 106a sending a second request for second count of the network addresses for a second set of network addresses (e.g. number of IP addresses requested); determining the second set of network addresses based at least in part on the first set of network addresses and the second count, and sending a first

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response indicating the second set of network addresses (col. 16 lines 57 through col. 17 1st paragraph); determining if there are available network addresses in a pool of available addresses (Figure 12, block 1204); however, Schutte fails to teach if no available addresses in the pool selecting a first subnet from the pool of available subnets and adding said selected first subnet's network addresses to said pool of available addresses.

Taniguchi teaches method for determining if there is no address available in the pool the DHCP can try to borrow wider subnet address and if the wider subnet inspects subnet address table and if the address space is free it will provide the address to the requester (see page 10 section 6.7 Wider subnet address).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was made to incorporate Taniguchi's teaching into Schutte's method to get an available address from a different subnet to add to the pool so it can make available for other subnet that needed it to configure another host..

7. Regarding claim 2, Schutte further discloses receiving, from a first host on the network (e.g. IPA manager 1204), a message requesting a network address, and sending, to the first host in response to the second message, a second response offering a first network address based on the first set of network addresses and the second set of network addresses (col. 16 lines 57 through col. 17 1st paragraph).

8. Regarding claim 3, Schutte further discloses the first set includes the first network address and the second set does not include the first network address e.g. IPA manager has a list of free IP addresses and based on the free addresses list it then assign IP addresses to appropriate requested) (col. 17 1st paragraph).

9. Regarding claim 4, Schutte further discloses receiving from a network administrator a third message indicating a third set of network addresses for dynamically configuring hosts on the network (col. 10 lines 15-31).

10. Regarding claim 5, Schutte further discloses determining usage of the first set of network addresses, wherein the usage comprises a proportion of a number of network addresses used compared to a total number of addresses in the first set (Figure 12; IPA manager maintain a total addresses the is used an available for each Net ID, which contain a plurality of subnets col. 17 2nd paragraph).

11. Regarding claim 6, Schutte further discloses reporting the usage of the first set of network addresses (col. 17 2nd paragraph).

12. Regarding claim 7, Schutte further discloses determining the second set of network addresses are further based at least in part on the usage of the first set of network addresses (col. 16 lines 57 through col. 17 2nd paragraph).

13. Regarding claim 8, Schutte further discloses the first message further indicates a first time interval for use of the first set, and the method further comprises sending, before the first time interval expires, a second request for renewal of use of the first set; and the second request includes data indicating the usage of the first set (col. 17 lines 49-64).

14. Regarding claim 9, Schutte further discloses receiving a third message for renewal of use of the second set, the third message including data indicating the usage of the second set, determining a third set of network addresses for dynamically configuring hosts on the network based on the second set and the usage of the second set wherein the usage is determined in part based on a number of network addresses used in a local table of leased network addresses for

subnets used, and sending a second response indicating the second set of network addresses (col. 17 lines 49-64).

15. Regarding claim 10, Schutte further discloses each set of the first set and the second set is indicated by a base address and a number indicating a range of addresses above the base address (col. 10 lines 49 through col. 11 lines 37).

16. Regarding claim 11, Schutte further discloses the number indicating the range is a mask that indicates a number of most significant bits in the base address that are constant over the range (col. 10 lines 49 through col. 11 lines 37).

17. Regarding claim 12, Schutte further discloses second set is empty e.g. no user request for IP address).

18. Regarding claim 13, Schutte further discloses the second set is the same as the first set e.g. whenever number users of 1st subnet is equal users on the 2nd subnet).

19. Regarding claim 14, Schutte further discloses the hosts on the network include interfaces on a router on the network (Figure 1).

20. Regarding claim 15, Schutte further discloses receiving, from a router on the network, a third message requesting a third count of network addresses for a third set of network addresses for configuring interfaces on the router, determining the third set of network addresses based at least in part on the first set of network addresses, the second set of network addresses, and the third count, and sending, to the router in response to the third message, a second response indicating the third set of network addresses (Abstract; further rejected in the same rationale as rejected in the RF modems because both Router and RF modems are requested set of IP address from the DHCP server and IP addresses are provided by the IPA manager).

21. Regarding claim 16, Schutte further discloses the first message received includes data indicating that a first server should send a third set of network addresses for dynamically configuring hosts on the network, and the method further comprises sending, in response to the data indicating that the first server should send the third set, a second request for the third set of network addresses (col. 16 lines 57 through col. 17 1st paragraph).

22. Regarding claim 17, Schutte further discloses receiving, from the first server in response to the second request, a third message indicating the third set of network addresses (Abstract; and col. 16 lines. 57 through col. 17 15th paragraph).

23. Regarding claim 18, Schutte further discloses determining that a third set of network addresses should be sent based at least in part on the first set and the second set, and inserting into the first response data indicating that a third set of network addresses for dynamically configuring hosts on the network should be sent e.g. Figures 1 and 12, discloses a router or multiple RF modems (106 a-n) provide IP address(es) to a plurality of PCs (108 a-n). Inherently, router and each of the RF modems such as 106a sending a request for number of counts e.g. number 1P addresses requested) of the network addresses for a n-set of network addresses e.g. number of IP addresses requested) and based upon the Per NET Free IP Address List 1211 the IPA manager will then assign n-set of network addresses to the router or multiple RF Modems).

24. Regarding claim 19, Schutte further discloses the method further comprises determining usage of the first set of network addresses wherein the usage is determined in part based on a number of network addresses used in a local table of leased network addresses for subnets used, and said step of determining that a third set of network addresses should be sent is based at least in part on the usage of the first set (Figure 12; IPA manager maintain a total addresses the is used

an available for each Net ID in which each Net ID may contain a plurality of subnets; Figure 12; col. 16 lines 56 through col. 17 lines 31).

25. Regarding claim 20, Schutte further discloses receiving, in response to the data indicating that the third set of network addresses should be sent, a third message requesting the third set of network addresses (col. 16 lines 56 through col. 17 lines 31).

26. Regarding claim 23, Schutte further discloses receiving, from the first server in response to the first request, a first message including first data indication the first set of network addresses and second data indicating that the first server should send a second set of network address for dynamically configuring hosts on the network and sending, to the first server in response to the data indicating that the first server should send the second set, a second request for the second set of network addresses (col. 16 lines 57 through col. 17 1st paragraph).

27. Regarding claim 28, Schutte further discloses the second message includes data indicating that a requesting device that issued the second message does not make assignments of individual network addresses from among the second set of network addresses such that all future requests for such assignments will be relayed back e.g. Each address in the set of addresses are assign to the Router or RF modem is contain a lease mechanism with can only for a limited period of time) (col. 17 lines 49-56).

28. Regarding claim 29, Schutte further discloses the second message includes data indicating that a requesting DHCP server should free the second set of network addresses as soon as possible by making no new assignments of addresses or subnets therefrom e.g. when the RF modems is inactive the IP addresses assign to the RF modems will be deassign back to the IPA manager) (col. 17 lines 32-48).

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29. Regarding claim 30, Schutte further discloses that a requesting DHCP server should discontinue use of the second set of network addresses when all addresses in the subnet are unassigned e.g. when the RF modems is inactive the IP addresses assign to the RF modems will be deassign back to the IPA manager) (col. 17 lines 32-48).

Allowable Subject Matter

30. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

31. Claims 21 and 22 are allowed.

Conclusion

32. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on May 12, 2005 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

R. Droms, "Dynamic Host Configuration Protocol", Network Working Group RFC 2131, March 1997, pages 1-43.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuoc H. Nguyen whose telephone number is 571-272-3919. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuoc H Nguyen

Application/Control Number: 10/001,415

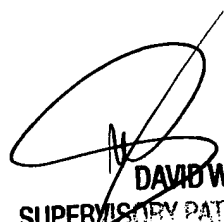
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Examiner

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August 1, 2005



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SUPERVISORY PATENT EXAMINER
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